

U.S. PATENT OFFICE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,269	11/28/2000	Simon Kasif	0918.2033-000 (P00-3373)	7893
7590 04/26/2004			EXAMINER	
IP Administration Legal Department, M/S 35 Hewlett-Packard Company P.O. Box 272400 Fort Collins, CO 80527-2400			ZEMAN, MARY K	
			ART UNIT	PAPER NUMBER
			1631	
DATE MAILED: 04/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/8/03, 10/30/03.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14, 16 and 19-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-14, 16 and 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

4) ☐ Interview Summary (PTO-413)

### **DETAILED ACTION**

Claims 1-5, 7-14, 16, and 19-30 are pending in this application. Claims 21-30 are newly added.

Applicant's arguments filed 8/8/03 have been fully considered but they are not completely persuasive. Any rejection not repeated below has been withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The drawings were received on 10/30/03. These drawings are acceptable to the examiner.

### ***Rejections Maintained***

Claims 1-5, 7-9 and 19 remain rejected and new claims 21-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are drawn to methods of manipulating data which do not produce a concrete, tangible and useful result. *To the extent this rejection is newly applied, it is necessitated by Applicant's amendments.*

Applicant argues that the claimed methods are the analysis of a physical object. This is not persuasive, as only data is actually analyzed. Information or representations of known biological fragments, and information of a subject genome sequence. Neither of these are actual physical objects- no "wet" experiments are performed. Applicant further argues that the methods are useful, in that they provide classification, clustering or indexing of a sequence. These final steps of the methods of "clustering, classifying or indexing" of the data, are not a concrete tangible and useful result as set forth in the MPEP. Examples of data manipulations that have been shown to meet the standard include methods that result in a "dollar value", a "Buy or sell recommendation" or a "yes or no" answer. The value that is obtained must be immediately useful, without further transformation or manipulation by the user.

As set forth previously in MPEP 2106: "For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31USPQ2d at 1556-57

31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at 114-19). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See *AT & T*, 172 F.3d at 1358, 50 USPQ2d at 1452.

Likewise, a machine claim is statutory when the machine, as claimed, produces a concrete, tangible and useful result (as in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601) and/or when a specific machine is being claimed (as in *Alappat*, 33 F.3d at 1544, 31 USPQ2d at 1557 (in banc))."

### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7-14, 16, and 19-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This is a new grounds of rejection necessitated by Applicant's amendments.

The metes and bounds of the limitation "including one of classifying, clustering or indexing the subject genome sequence" in claims 1, 5, 21 and 26 are unclear, as each of these three functions would require differing steps which are not set forth in the claims such that one of skill in the art would be apprised as to how to perform the step, or what the scope of the claimed invention comprises. These terms encompass vast and numerous data manipulation steps that are not clearly denoted in the claims. On what basis does the classification, clustering or indexing occur? It would appear that the method must be iterated at least once, to allow for differing classifications, clusters or indexes to exist, however, the claim is not so limited. What are the boundaries for each class, cluster or index? How are the boundaries developed, and to what degree of specificity must the analysis match the class, cluster or index in order to be included? In claim 1, this limitation is preceded by "using the uniform representation" in this

analysis, which is not further illuminating, as the “using” has no specific method steps associated with it. Claims 10, 14, 19, and 20 have a similar problem with the analysis, indexing, clustering or classification features. What is the analysis? What makes up the index? What are the clusters, and how close must two values be to be considered able to be clustered together? What are the classifications and how similar must a value be to be put in a particular class?

Claim 5 appears to be a duplicative claim, as its limitation is already present in claim 1.

### *Conclusion*

No claim is allowed.


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P Woodward can be reached on (571) 272 0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the electronic file wrapper for this application, or on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**MARY K. ZEMAN**  
**PRIMARY EXAMINER**  
